

A CHECK LIST OF THE NEW SOUTH WALES PTERIDOPHYTES.

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There has been no comprehensive publication on the nomenclature of the Pteridophytes of New South Wales since the Census of 1916. Since then there have been some radical changes in our knowledge of the systematics of the Filicales, and some changes in nomenclature. These changes are embodied in this list, which is intended to cover all the past nomenclature of the Pteridophytes which has been in use in this State. Brief explanatory notes have been inserted where it has been considered necessary.

All the species listed are represented by New South Wales specimens in the National Herbarium, except where otherwise indicated.† Some of these may be represented by specimens whose localities are not given.

LYCOPODIALES.

LYCOPODIACEAE.

PHYLLOGLOSSUM Kuntze, in Mohl and Schlechtendal, *Bot. Zeit.*, 1843, 721.

**P. Drummondii* Kuntze, l.c. (M. & B.; C.)

LYCOPODIUM Rupp., *Fl. Jen.*, 1718, 32.

L. Selago L., *Sp. Plant.*, 1753, 1102.

L. varium R.Br., *Prodromus*, 1810, 165.

L. cernuum L., l.c.

L. densum Labill., *Nov. Holl. Plant.*, ii, 1806, 1104.

L. clavatum L., l.c., var. *fastigiatum* Benth., *Fl. Austr.*, vii, 1878. (*L. fastigiatum* R.Br.)

L. laterale R.Br., l.c., p. 165.

**L. carolinianum* L., l.c., p. 1104. (M. & B.; D.; C.)

SELAGINELLACEAE.

SELAGINELLA Beauv., *Prodr. des familles de l'Aeth.*, 1805, 101.

**S. Preissiana* Spring, *Mem. Acad. Brux.*, 1842, 61. (M. & B.; C.)

S. uliginosa Spring, l.c., p. 60.

S. Belangeri Spring, l.c., 1849, 242.

† Explanation of abbreviations:

*—No specimens from New South Wales in the National Herbarium, Sydney.

B.—Recorded by Bentham, *Flora Australiensis*, 1878, but no specimens in the Herbarium.

M. & B.—Recorded by Moore and Betche, *A Handbook to the Flora of New South Wales*, 1893, but no specimens in the Herbarium.

C.—Recorded by Maiden and Betche, *A Census of New South Wales Plants*, 1916, but no specimens in the Herbarium.

D.—Recorded by Domin, *Beiträge zur Flora und Pflanzengeographie Australiens*, in *Bibl. Bot.*, Bd. XX, but no specimens in the Herbarium. Most of Domin's records for New South Wales were, however, taken from other authorities.

ISOETACEAE.

ISOETES L., *Skanska resa*, 1751, 420.

A species of *Isoetes* is recorded for New South Wales and there are specimens from the Victorian side of the Murray River in the National Herbarium. These plants are certainly not *I. Drummondii*, nor do they seem to conform to descriptions of any other species.

PSILOTALES.

PSILOTACEAE.

TMESIPTERIS Bernh., Schrad. Journ., ii, 1800, 131.

T. tannensis Bernh., l.c., including *T. elongata* Dang. and *T. lanceolata* Dang.

PSILOTUM Sw., Schrad. Journ., ii, 1800, 109.

P. nudum (L.) Griesb. in Veget. d. Karaiben, 1857, 130. (*P. triquetrum* Sw.; *Lycopodium nudum* L.)

FILICALES.

OPHIOGLOSSACEAE.

OPHIOGLOSSUM L., Gen. Plant., 1753, 503.

O. coriaceum A. Cunn. in Hk., Comp. to Bot. Mag., ii, 1836, 367. (*O. gramineum* R.Br.)

O. costatum R.Br. Prodr.

Some specimens of *Ophioglossum* collected by Mr. E. Cheel in the Orange district have been identified by him as *O. Prantlii* C.Ch. (*O. lanceolatum* Prantl, *O. vulgatum* var. *lanceolatum* Luerss., *O. vulgatum* var. *gramineum* Bailey) in Proc. LINN. Soc. N.S.W., 1924, with the proviso that this species may not be specifically distinct from *O. lusitanicum* Linn. The specimens are indistinguishable from the common Australian species *O. coriaceum* A. Cunn. which is the Australian counterpart of *O. lusitanicum*, having ovate to ovate-lanceolate sterile fronds.

O. pendulum L., Sp. Plant. ed. ii, ii, 1763, 1518.

BOTRYCHIUM Sw., Schrad. Journ. 1800², 1801, 8, 110.

B. lunaria (L.) Sw., l.c.

B. australe R.Br., Prodr., 1810, 164. (*B. ternatum* var. *australe* Domin.)

MARATTIACEAE.

ANGIOPTERIS Hoffm., Comm. Soc. Reg. Gotting., xii, 1793[?], 29.

A. evecta Hoffm., l.c. Recorded in Proc. LINN. Soc. N.S.W., 24, 1909, 367.

OSMUNDACEAE.

TODEA, Schrift. Akad. Erfurt., 1802, 14.

T. barbara (L.) Moore Ind., 1857, cxix. (*Osmunda barbara* Thunb.)

LEPTOPTERIS Presl, Suppl. Tent. Pterid., 1845, 70.

L. Fraseri (Hk. and Grev.) Presl, l.c. (*Todea Fraseri* Hk. and Grev.)

SCHIZAEACEAE.

LYGODIUM Sw., Schrad. Journ., 1800², 1801, 106.

L. scandens (L.) Sw., l.c.

SCHIZAEA Sm., Mem. Acad. Turin, v, 1793, 419.

S. bifida Willd., Schrift. Akad. Erf., 1802, 30.

S. dichotoma (L.) Sm., l.c., p. 422, t. 9. The var. *Forsteri* is recorded by Domin (*Bibl. Bot.*, Bd. xx, p. 207) as occurring in New South Wales, but he states that he himself has not seen true specimens from Australia.

- S. fistulosa* Labill., Nov. Holl. Pl. Ins. Sp., ii, 1806, 103.
S. rupestris R.Br., l.c., p. 162.

MARSILEACEAE.

- MARSILEA L., Gen. Plant., 1753, 799.
M. angustifolia R.Br., l.c., p. 167. Recorded in PROC. LINN. SOC. N.S.W., 30, 1905, 374.
M. Brownii A.Br., Monatsber. Ak. Berl., 1863, 418. (*M. quadrifolia* Benth., non L.)
M. Drummondii A.Br., Linnaea, 25, 1853, 721.
 var. *Nardu* Benth. impl., Fl. Austr., vii, 1878, 674. (*M. Nardu* A.Br.)
M. exarata A.Br., Monatsber. Ak. Berl., 1870, 732.
M. hirsuta R.Br., l.c., 167.

PILULARIA.

- **P. Novae-Hollandiae* A.Br., l.c. (B.; C.). (*P. globulifera* Benth., non L.)

GLEICHENIACEAE.

GLEICHENIA Sm., l.c.

- G. circinata* Sw., l.c., p. 107.—This species was originally described by Swartz in 1801 from a limited number of specimens. Robert Brown, in 1810, from a larger supply of material, discarded Swartz's species as insufficiently described (characteres haud convenientes), and described three species of *Gleichenia*: *G. microphylla*, *G. rupestris*, and *G. speluncae* (l.c., p. 161). Of these, *G. microphylla* is apparently synonymous with *G. circinata* but more carefully defined; it is frequently given as a variety of *G. circinata* (v. Domin, e.g.). *G. rupestris* is a glabrous form without the hirsute rachis of Swartz's species and has fronds which are glaucous below. *G. speluncae* is described as "frondibus furcatis . . . lobis semiovatis planis membranaceis subtus glaucis, capsulis 3-4 exsertis". In the National Herbarium, Sydney, the only specimens which agree with this description are a few fronds which are membranous and only once or twice forked. They appear to be juvenile fronds of Brown's *G. rupestris*. Thus the specimens may be classified as *G. circinata* which has priority despite its imperfect description, and Brown's *G. rupestris* which is worthy only of varietal rank.

var. *rupestris* Benth. impl., Fl. Austr., vii, 1878, 697.

G. dicarpa R.Br., l.c., p. 161.

G. flabellata R.Br., l.c.

G. flagellaris (Bory) Spreng. Syst., iv, 1827, 25. (*G. laevigata* (Willd.) Hk.)
 Recorded in PROC. LINN. SOC. N.S.W., 34, 1909, 366.

G. linearis (Burm.) Clarke, Trans. Linn. Soc., ii, Bot. i, 1880, 428. (*G. dichotoma* Hk.; *G. Hermannii* R.Br.)

PLATYZOMA R.Br., l.c.

P. microphyllum R.Br., l.c.

HYMENOPHYLLACEAE.

TRICHOMANES L., Sp. Plant., ii, 1753, 1907.

- **T. omphalodes* (Vieill.) C.Chr., Ind. Fil., 1906, 646. (*T. peltatum* Bak.) (C.)
 **T. Bauerianum* Endl., Prodr. Fl. Norf., 1833, 17. (*T. apifolium* Presl; *T. meifolium* F.v.M., non Bory.) (B.; D.; C.; M. & B.)
T. digitatum Sw., var. *calvescens* Benth. impl., l.c., p. 12. (*T. calvescens* V.d.B.; *Hymenophyllum Cattlettii* C. Moore.)

- **T. humile* Forst., Prodr., 1786, 84. (M. & B.; C.)
T. javanicum Bl., Enum., 1828, 224.
T. parvulum Poir., Encycl., viii, 1808, 64.
T. rigidum Sw., Prodr., 1788, 137.
T. venosum R.Br., Prodr., 1810, 159.
T. vitiense Bak., Journ. Linn. Soc., ix, 1866, 338.
HYMENOPHYLLUM Sm., Mem. Acad. Turin, v, 1793, 418.
H. australe Willd., Sp. Plant., 5, 1810, 527. (*H. javanicum* Spreng.)
H. bivalve (Forst.) Sw., Schrad. Journ., 1800², 1801, 99. Recorded in Wing's
Southern Science Record, June, 1883.
H. flabellatum Labill., Nov. Holl. Plant., ii, 1806, 101. (*H. nitens* R.Br.)
H. marginatum Hk. and Grex., Ic. Fil., 1829, i, t. 34. Recorded in Proc. LINN.
Soc. N.S.W., 8, 1884, 469, and 37, 1912.
H. pumilum C. Moore, Hk. and Bak. Syn. Fil., 1874, 464.
H. rarum R.Br., l.c., p. 159 (*H. lucens* C. Moore).
H. tunbridgense (L.) Sm., in Sowerb. Engl. Bot., 1794, t. 162.
H. peltatum Poir. Recorded in Proc. LINN. Soc. N.S.W., 1916.

SALVINIACEAE.

- AZOLLA Lam., Encycl. meth., i, 1783, 343.
A. filiculoides Lam. var. *rubra* Diels. (*A. rubra* R.Br.).
A. pinnata R.Br., l.c., p. 167.

DICKSONIACEAE: Subfamily DICKSONIEAE.

CULCITA Presl.

- C. dubia* (R.Br.) Maxon, Journ. Wash. Acad. Sci., 12, 1922, 458. (*Davallia dubia*
R.Br.; *Dicksonia dubia* Gaud.; *Sitolobium dubium* Brack.; *Balantium dubium*
(R.Br.) Copel.)
DICKSONIA L'Her., Sertum anglicum, 1788, 30.
D. antarctica Labill., Nov. Holl. Plant., ii, 1806, 100. (*D. Billardieri* F.v.M.)
D. Youngiae C. Moore, Proc. Hort. Soc., also in Hk. and Bak. Syn. Fil., 1874, 461.

Subfamily DENNSTAEDTIINAE.

- DENNSTAEDTIA Bernh., Schrad. Journ., 1800², 1801, 124.
D. davallioides (R.Br.) Moore, Parker's Cat., 1858. (*Dicksonia davallioides* R.Br.;
Davallia dicksonioides F.v.M.)
HYPOLEPIS Bernh., Schrad. neu Journ., 1², 1806, 34.
H. tenuifolia (Forst.) Bernh., l.c.
H. punctata (Thunb.) Mett. (*Dryopteris punctata* (Thunb.) C.Chr.; *Polypodium*
punctatum Thunb.; *Phegopteris punctata* Mett.) The transfer of this species
and the next to *Hypolepis* from *Polypodium*, *Dryopteris*, etc., is already
widely accepted. Anatomical features are definitely in accord with a
Dicksonioid relationship, and the species are only superficially similar to
the Polypodiums and Dryopteroid ferns with which they have commonly
been classified.
H. rugulosa (Lab.) J.Sm., Bot. Mag., lxxii, 1846, Comp. 8. (*Dryopteris punctata*
subspecies *rugosula* C.Chr.; *Phegopteris punctata* var. *rugulosa* v. Alder
v. Rosenberg; *Polypodium rugosulum* Labill.; *Phegopteris rugulosa* Fée;
Phegopteris rugosula Mett.)

CYATHACEAE.

- ALSOPHILA R.Br., Prodr., 1810, 158.
A. australis R.Br., l.c.

- A. Cooperi* F.v.M., *Fragm.*, v, 1866, 117. (*A. excelsa* R.Br. var. *Cooperi* C. Moore, Hbk. *Fl. N.S.W.*, 1893, 505, as a synonym.)
A. Leichhardtiana F.v.M., l.c., 1865, 53.
A. Loddigesii Kuntze, *Linnea*, 20, 1847, 7; *Bak. Syn. Fil.*, 458.
 CYATHEA Sm., *Mem. Acad. Turin*, v, 1793, 416.
C. Lindsayana Hk., *Sp. Fil.*, 1865, 25.

POLYPODIACEAE: Subfamily DAVALLIOIDEAE.

- DAVALLIA Sm., l.c., p. 414.
D. pyxidata Cav., *Descr.*, 1802, 278.
 NEPHROLEPIS Schott., *Gen. Fil.*, 1834, t. 3.
N. cordifolia (L.) Presl, *Tent. Pterid.*, 1836, 79. (*Aspidium cordifolium* Sw.)
 ARTHROPTERIS J.Sm., Hk. f., *Fl. N.Z.*, ii, 1854, 43.
A. Beckleri Mett., *Novara Exp. Bot.*, i, 1870, 213. (*Aspidium ramosum* var. *cumundi* Bailey.)
A. obliterated (R.Br.) J.Sm., *Cat. Cult. Ferns*, 1827, 62. (*Aspidium ramosum* Palis.)
A. tenella (Forst.) J.Sm., Hk. f., *Fl. N.Z.*, ii, 1854, 43. (*Polypodium tenellum*.)
 LINDSAYA Dryand., J.Sm., *Mem. Acad. Turin*, v, 1793, 413.
L. cuneata (Forst.) C.Chr., *Ind. Fil.*, 1906, 392. Recorded in *PROC. LINN. SOC. N.S.W.*, 1886, 929.
L. dimorpha Bailey, Hbk. *Queensland Ferns*, 1874, 19.
 **L. incisa* Prentice, *Journ. Bot.*, 1873, 295. (M. & B.; D.; C.)
L. linearis Sw., *Schrad. Journ.*, 1800², 1801, 78.
L. microphylla Sw., l.c., p. 79. Including var. *gracilescens* Domin.

Subfamily PTEROIDEAE.

- PTERIDIUM Gleditsch, *Scolopi. Flora Carniolica*, 1760, 169.
P. aquilinum (L.) Kuhn., v. *Deck. Reisen*, iii², *Bot.* ii, 1879. Including var. *pseudocaudatum* Domin and var. *aequipinnulum* Domin. (*Pteris aquilina* L.)
 HISTIOPTERIS (Agardh.) J.Sm., *Hist. Fil.*, 1875, 295.
H. incisa (Thunb.) J.Sm., l.c. (*Pteris incisa* Thunb.)
 PTERIS L., *Hort. Cliff.*, 1737, 443.
P. longifolia L., *Sp. Plant.*, ii, 1753, 1074. (Including var. *brevipinna* Domin.)
P. umbrosa R.Br., *Prodr.*, 1810, 154.
P. tremula R.Br., l.c. (*P. arguta* F.v.M., non Ait.)
P. tripartita Sw., *Schrad. Journ.*, 1800², 1801, 67. (*Pteris marginata* Bory.)
P. comans Forst., *Prodr.*, 1786, 79. Including *P. Endlicheriana* Agardh.
 **P. ensiformis* Burm., *Fl. Ind.*, 1768, 230. Recorded, without specific locality, by Domin; doubtful.

ACROSTICHUM L., *Gen. Plant.*, 1737, 785.

A. aureum L., *Sp. Plant.*, ii, 1753, 1069. The old subfamily Acrosticheae has been clearly shown to be composite in nature and many of its original constituents have been removed. Developmental studies of this and other species of *Acrostichum* show that the genus is unmistakably a Pteroid derivative. The soral condition of the "Acrosticheae" has been attained by loss of the indusium and soral spread in most of the subfamilies of the Polypodiaceae, but nearly all those which show the Acrostichoid state give evidence, in their other features, of their true relationships. In *Acrostichum* itself, the sporangia do not originate simultaneously all over the surface but,

like the Pteroid ferns, begin their development marginally, spreading towards the centre.

Subfamily GYMNOGRAMMOIDEAE.

This is a composite subfamily comprising Schizaeoid and Osmundaceous derivatives, centred around the old genus *Gymnogramme*. The group includes a large percentage of the old subfamily Pterideae, which have been shown to conform to an Osmundaceous or Schizaeoid, exindusiate type, rather than to the bi-indusiate Dicksonioid type from which originated the Davallioid and Pteroid ferns. A true indusium is phyletically absent, but the leaf margin is often membranous and recurved over the sorus in imitation of this structure.

The chief superficial distinguishing features between genera of this group, such as *Pellaea*, and Pteroid ferns, is the consistent occurrence of hard dark, often polished, petioles and rachides.

CERATOPTERIS Brongn., *Bull. Soc. Phil.*, 1821, 186.

C. thalictroides (L.) Brongn., l.c.—This species has usually been separated from the Polypodiaceae because of its somewhat irregular sporangial characters. These are marked irregularities of the annulus, and great variations in spore output, both of which features are typical of primitive ferns in general, and are seen in a small group of rather rare ferns classified with *Ceratopteris*.

ANOGRAMMA Link, *Fil. Sp.*, 1841, 137.

A. leptophylla (L.) Link, l.c. (*Grammitis leptophylla* Sw.)

ADIANTUM L., *Gen. Plant.*, 1737, 782.

A. aethiopicum L., *Syst. Nat.*, ed. x, ii, 1759, 1329.

A. formosum R.Br., *Prodr.*, 1810, 155.

A. diaphanum Bl., *Enum.*, 1828, 215.

A. hispidulum Sw., *Schrad. Journ.*, 1800², 1801, 82.

A. affine Willd., *Sp. Plant.*, v, 1810, 448. *A. Cunninghamsi* Hk. is apparently synonymous with this species, though Christensen separates them. He states that *A. affine* occurs only in New Zealand, while *A. Cunninghamsi* is common to Australia, New Zealand and several of the Pacific islands. In New Zealand, however, the two are not separated (Cheeseman, *Hbk. Fl. N.Z.*, 1914), and the distinction, which is based on the glaucous or non-glaucous character of the pinnules, is unsatisfactory, since all intermediate states of glaucousness are found.

The var. *intermedium* Benth. is excluded: the distinction (length of indusia) is not valid. There is almost no difference between length and breadth in most of the indusia, nor is the difference, where it exists, constant.

PELLAEA Link, *Fil. Sp.*, 1841, 48, 59.

P. falcata (R.Br.) Fée, *Gen. Fil.*, 1850, 129. (*Pteris falcata* R.Br.) The variety *nana* Bailey is excluded. Many plants in different localities have been examined and, though a few extremes are separable, the characters of tufted rhizome and close or overlapping pinnae, which distinguish the variety, are by no means constant. One finds all combinations of the two characters, which seem to be a feature of the habitat.

P. paradoxa (R.Br.) Hk., *Sp. Fil.*, ii, 1858, 135. Including var. *normalis* Domin, l.c. (*Pteris paradoxa* Bak.)

DORYOPTERIS J.Sm., *Journ. Bot.*, iii, 1841, 404.

D. concolor (Langsd. and Fisch.) Kuhn., v. *Deck. Reisen*, iii³, 1879, *Bot.* 19. (*Pteris concolor* Langsd. and Fisch.; *Pteris geraniifolia* Raddi.)

CHEILANTHES Sw., Syn. Fil., 5, 1806, 126.

C. tenuifolia (Burm.) Sw., l.c., 1806, 129, 332. The variety *Sieberi* Benth. impl. is excluded: the character of an almost erect rhizome is quite inadequate as a distinguishing feature. The species has its leaves crowded on the rhizome, so that a short rhizome gives a tufted appearance; most of the rhizomes examined are short, and apparently slow growing.

NOTHOLAENA R.Br., l.c., p. 145.

N. Brownii Desv., Prodr., 1827, 220. (*N. vellea* R.Br.; *Cheilanthes vellea* F.v.M.)

N. distans R.Br., l.c., 146. (*Cheilanthes distans* A.Br.)

Subfamily DRYOPTEROIDEAE.

CYSTOPTERIS Bernh., Schrad. neu. Journ., 1^o, 1806, 5, 26.

C. fragilis (L.) Bernh., l.c. (*Woodsia laetivirens* Prentice.) Although the true systematic position of this fern is by no means certain, it is usually included in the section Woodsieae of Dryopteroid or Aspidioid ferns, and will be classified here until a better position can be assigned to it.

DRYOPTERIS Adans., Fam. des Plant., ii, 1763, 20.

D. decomposita (R.Br.) O. Kuntze, Rev. Gen. Plant., ii, 1891, 812. (*Aspidium decompositum* R.Br.) Including *D. lanciloba* var. *glabella* Benth. impl. This is the reference given in Maiden and Betche's Census, though Bentham does not mention the name *glabella*. (*D. glabella* (A. Cunn.) C.Ch.)

D. acuminata (Lowe) Watts, Proc. Linn. Soc. N.S.W., 41, 1916, 380. The variety *cristata* Watts, l.c., is excluded; *D. acuminata* has a tufted rhizome, but the type specimen of the variety has a creeping one, with its leaves much closer together than on the typical creeping rhizomes of *D. decomposita* and *D. queenslandica*. This, however, is a common feature of the early stages of tufted rhizomes, and the cristate character of the fronds is almost certainly an aberrant one: no further crested fronds could be found in the same locality, though several similar rhizomes were unearthed.

D. tenera (R.Br.) C.Ch., l.c., p. 297. (*Aspidium tenerum* Spreng.)

**D. setigera* (Bl.) O. Kuntze, l.c., p. 813. (*Aspidium tenericaule* Thw.; *A. uliginosa* Kuntze.) (M. & B.; B.)

D. queenslandica Domin, Bibl. Bot., Bd. xx, p. 44. (*D. Baileyi* Maiden and Betche; *Polypodium aspidioides* Bailey.) Maiden and Betche were undoubtedly right in referring this species to *Dryopteris*, and in requiring a name other than that already used for an American species (*aspidioides*), but this alteration had already been effected by Domin, three years prior to the publication of the Census of Maiden and Betche.

D. gongylodes (Schkuhr) O. Kuntze, l.c., p. 811. (*Aspidium unitum* Sw.)

D. parasitica (L.) O. Kuntze, l.c. (*Aspidium molle* Sw.)

D. truncata (Poir.) O. Kuntze, l.c., p. 814. (*Aspidium truncatum* Gaud.)

**D. prolifera* (Retz.) C.Ch., l.c., p. 286. (*Polypodium proliferum* Presl.) (B.; M. & B.; C.)

POLYSTICHUM Roth., Röm. Mag., 2^o, 1799, 106.

P. aculeatum (L.) Schott., Gen. Fil., 1834, ad. t. 9. (*Aspidium aculeatum* Sw.)

The plants of this species vary tremendously in the degree of scaly development, and of proliferation from the frond. A large collection from all over the State shows a degree of constancy in the type from any one ecological situation, a fact which indicates that the variations are probably due to habitat. The number of buds formed on the frond varies too with environmental conditions, as the cultivation of wild plants will readily

show. A specimen from Robert Brown's collection, which he named *P. proliferum*, is nearly glabrous, and bears a single bud near the apex of the frond. One rarely finds plants without any buds, and all are apparently capable of proliferation when conditions are favourable. Maiden and Betche's varieties (the species *P. proliferum* and *P. vestitum* of Diels and Christensen) are therefore excluded.

- P. aristatum* (Forst.) Presl, Tent. Pterid., 1836, 83. (*Aspidium aristatum* Sw.)
 *var. *carvifolium* Maiden and Betche. (*P. carvifolium* (O. Kuntze) C.Chr.) (C.)
P. adiantiforme (Forst.) J.Sm., Hist. Fil., 1875, 220. (*Aspidium capense* Willd.;
A. coriaceum Sw.)
P. hispidium (Sw.) J.Sm., Journ. Bot., iv, 1841, 195. (*Aspidium hispidium* Sw.)

Subfamily ASPLENOIDEAE.

ATHYRIUM Roth., Röm. Mag., 2ⁱ, 1799, 105.

- A. umbrosum* (Ait.) Presl, Tent. Pterid., 1836, 98. (*Asplenium umbrosum* J.Sm.)
 var. *semidivisum* E. C. Chisholm, Proc. LINN. Soc. N.S.W., lix, 1934, 143.
A. humile Watts, Proc. LINN. Soc. N.S.W., 41, 1916, 380. The name is included here until further material can be found. It is highly probable that the type specimen is a juvenile frond of *Diplazium japonicum* Beddome.

DIPLAZIUM Sw., Schrad. Journ., 1800², 1801, 61.

- D. maximum* (Don) C.Chr., l.c., p. 235. (*Asplenium maximum* Don.)
D. japonicum (Thunb.) Beddome, Supplement to the Ferns of Southern India, etc., Madras. There has always been some doubt as to the occurrence of this species in New South Wales, owing to a description from a doubtful specimen in Bentham's Flora Australiensis, but recent collections from several localities in the North Coast district have confirmed the original record.

ASPLENIUM L., Gen. Plant., 1737, 783.

- A. nidus* L., Sp. Plant., ii, 1753, 1079.
A. attenuatum R.Br., Prodr., 1810, 150.
 var. *multilobum* F.v.M., Fragm., v, 1866, 131.
A. flabellifolium Cav., Descr., 1802, 257.
A. trichomanes L., Sp. Plant., ii, 1753, 1080.
A. obtusatum Forst., Prodr., 1736, 80. (*A. marinum* F.v.M., non L.)
 var. *difforme* Benth. (*A. difforme* R.Br.)
A. adiantioides (L.) C.Chr., Ind. Fil., 1906, 99. (*A. falcatum* Lam.) The var. *caudatum* Benth. impl. is excluded; it is given specific rank by van Rosenburg in Malayan Ferns (1908), where it is distinguished by the position of the higher sori which are "sub-parallel and nearly close to the costa, occupying the lower part of the veins". In *A. adiantioides* they are "erecto-patent, and not sub-parallel to the costa". In the New South Wales specimens at least, the variety is not constantly separable.
 **A. Hookerianum* Col., Tas. Journ., ii, 1884, 169. (B., doubtful.)
 **A. praemorsum* Sw., Prodr., 1788, 130. (*A. furcatum* Thunb.) (B.; C.)
A. bulbiferum Forst., Prodr., 1786, 80.
A. flaccidum Forst., l.c.
 PLEUROSORUS Fée, Gen. Fil., 1850-52, 179.
P. rutifolius (R.Br.) Fée, l.c., p. 180. (*Grammitis rutifolia* R.Br.; *Gymnogramme rutaefolia* Hk.)

Subfamily BLECHNOIDEAE.

BLECHNUM L., Sp. Pl., ii, 1753, 1077.

B. cartilagineum Sw., Syn. Fil., 1806, 114, 312. Including the four varieties of Domin: var. *normale*, var. *appendiculatum*, var. *tropicum*, var. *woodwardioides*.

B. serrulatum Rich., Act. Soc. Hist. Nat. Paris, i, 1792, 114.

B. Patersoni (R.Br.) Mett., Fil. Lips., 1856, 64, t. 4. Including var. *normale* Domin (*Lomaria elongata* var. *Cunninghamiana* Hk.), and var. *elongata* (Bl.) Domin. (*Lomaria Patersoni* Spreng.)

B. discolor (Forst.) Keyserling, Polyp. et Cyath. Herbarii Bungeana, 1873, 66. (*Lomaria discolor* Willd.) Including var. *normale* Domin, var. *nudum* Domin, var. *bipinnatifidum* Domin.

B. lanceolatum (R.Br.) Sturm., Enum. Pl. Crypt. Chil., 1858, 25. (*Lomaria lanceolata* Spreng.)

B. penna-marina (Poir) Kuhn, Fil. Afric., 1868, 92. (*Lomaria alpina* Spreng.)

B. capense (L.) Schlecht., Adumbr. Fil., 1825, 34, t. 18. (*Lomaria capensis* Willd.; *L. procera* Spreng.) Including var. *Gregsoni* Watts. Exact localities for the many varieties which he has set up are not given by Domin. The New South Wales specimens, though very variable, cannot be separated into constant varieties, with the exception of var. *laevigatum* (*Blechnum capense* subspecies *laevigatum* Domin), which has Blechnoid and not Lomarioid fertile fronds.

var. *laevigatum*, nov. comb.

B. fluviatile (R.Br.) Lowe, Salom. Nom., 1883, 115. (*Lomaria fluviatilis* Spreng.)

DOODIA R.Br., Prodr., 1810, 151.

D. aspera R.Br., l.c. (*Woodwardia aspera* Mett.)

D. caudata (Cav.) R.Br., l.c. (*Woodwardia caudata* Cav.) The variety *media* Benth. (*D. media* R.Br.) is inseparable from the species, which varies tremendously. Bentham himself, who transferred Brown's species to varietal rank, notes that he can find no difference other than size, and that intermediate specimens are numerous.

var. *Atkinsoniae* nomen nudum.—Woolfs refers in his Flora of Australia, without description, to this plant (from Kurrajong), which has apparently never been described. Betcher, on an herbarium sheet, notes that . . . "the variety *Atkinsoniae* is . . . worthy of specific rank". There are no specimens in the National Herbarium bearing the name *Atkinsoniae*. It should, therefore, be deleted from a list of New South Wales ferns.

D. maxima J.Sm., Bot. Mag., 72, 1846, Companion, p. 27. (*D. blechnoides* A. Cunn. *Woodwardia aspera* var. *blechnoides* F.v.M. impl.)

Subfamily DIPTEROIDEAE.

This subfamily has been separated by Bower (The Filicales, vol. iii, p. 200), and in it he has placed the genera *Cheiropleuria*, *Platyserium* and *Pleopeltis* (Malayan species), adding a note that probably many species of *Polypodium*, and especially *Cyclophorus*, would eventually be placed in the group. The constituent genera are shown to be derivatives of a *Dipteris* type, probably of Gleicheniaceous ancestry. They are superficially characterized by a reticulate venation of the *Anaxetum* type, and by simple, bifid or not highly divided leaves. They are always ex-indusiate. Below are included the New South Wales species of *Pleopeltis* (*Polypodium*) which conform generally to the characters of the subfamily, and also the single species of *Drynaria* which is found in this State.

PLEOPELTIS Humb. et Bonpl., Pl. aequinoct., Paris, 1805-1818.

P. Brownii (Wickstr.) Fournier, *Bull. Soc. Fr.*, 16, 1869, 424. (*Polypodium Brownii* Wickstr., *Polypodium attenuatum* R.Br.)

P. pustulata (Forst.) Moore, *Ind. Fil.*, 1857.

P. diversifolia (Willd.), nov. comb. (*Pl. Billardieri* Moore; *Polypodium diversifolium* Willd.).—The complicated synonymy of these two species has caused much confusion. The solution of the problem is clearly given by Domin (l.c.), who summarizes the situation as follows: the two species *Polypodium pustulatum* and *P. scandens*, set up by Forster in 1786, were only one species. In 1806 Labillardière described a plant from Tasmania which he said was identical with Forster's *P. scandens*, but he expressed doubt as to the validity of Forster's two species. However, Labillardière's plant, which he called *P. scandens*, was certainly different from Forster's species: it was described again in 1810 by Willdenow as *P. diversifolium*, and in the same year by Robert Brown as *P. Billardieri*. Domin says that, if Forster's names are synonymous, and *scandens* is therefore deleted from the genus as a specific name, then Labillardière's *P. scandens* must have precedence (for the Tasmanian plant), and Willdenow's *P. diversifolium* and Brown's *P. Billardieri* are synonyms of it. C. Christensen considers that *P. diversifolium* Willd. was the first true name for this species and, as this name is now generally in use, it has been adopted here. Christensen and Domin have adopted *P. pustulatum* Forst. for the other species. Unfortunately both Bentham, and Moore and Betche used the name *scandens*, now generally regarded as a synonym. Thus a reversal of the nomenclature in use in this State becomes necessary: *Polypodium pustulatum* of the Flora Australiensis (also of Bailey, Moore and Betche, etc.) must become *P. diversifolium* Willd., and *P. scandens* Forst. of Bentham, Bailey, etc., must become *P. pustulatum* Forst. Since their characters are those of the Dipteroid ferns and not of the true Polypodiaceae the generic name *Pleopeltis* has been adopted.

CYCLOPHORUS Desv., *Berl. Mag.*, v, 1811, 300. (*Niphotobolus* Kaulf.)

C. serpens (Forst.) C.Chr., *Ind. Fil.*, 1906, 201. (*Polypodium serpens* Forst.)

C. confluens (R.Br.) C.Chr., l.c., p. 198. (*Polypodium confluens* R.Br.)

DRYNARIA (Bory) J.Sm., *Journ. Bot.*, iv, 1841, 60.

D. rigidula (Sw.) Beddome, *Ferns Brit. Ind.*, 1869, t. 314. (*Polypodium rigidulum* Sw.)

HYMENOLEPIS Kaulf., *Enum. Fil.*, 1824, 146.

H. spicata (L. fil.) Presl, *Epimeliae botanicae*, 1849, 159. (*Acrostichum spicatum* L.)

PLATYCERIUM Desv., *Prodr.*, 1827, 213.

P. bifurcatum (Cav.) C.Chr., l.c., p. 498. (*P. alcicorne* Desv.)

P. grande (A. Cunn.) J.Sm., *Journ. Bot.*, iii, 1841, 402.

Subfamily POLYPODIEAE.

A systematic study of the Ferns such as Bower has undertaken in The Filicales, vols. i, ii, and iii, shows clearly that species of *Polypodium* which are commonly classified in the subgenus *Eu-Polypodium* are not closely related to species such as are included in this list with the Dipteroid ferns, though they are usually classified together in the subfamily Polypodiaceae. Only two species of the subgenus *Eu-Polypodium* occur in New South Wales, and it seems justifiable to include these as true members of the old subfamily Polypodiaceae.

POLYPODIUM L., Gen. Plant., 1753, 784.

P. Billardieri (Willd.) C.Chr., l.c., p. 513. (*P. australe* Mett.) Maiden and Betche used the name *P. australe* Mett. in preference to *P. Billardieri*, in order to avoid confusion, though they recognized that *P. Billardieri* had priority.

**P. grammitidis* R.Br., Prodr., 1810, 147. (C.)

In the making of this list the collections of Pteridophytes in the National Herbarium, Sydney, have been invaluable. I wish to express my thanks to Mr. Cheel, of the Herbarium, who placed the collections at my disposal, and to Professor Osborn, of the Department of Botany, Sydney University, for advice and helpful criticism.
